IN THE CLAIMS

    1.   (Canceled).

    2.   (Canceled).

    3.   (Canceled).

    4.   (Canceled).

    5.   (Canceled).

    6.   (Canceled).

    7.   (Canceled).

    8.   (Canceled).

    9.   (Canceled).

    10.   (Canceled).

11. (Previously Presented) An harmonic article identification system, comprising:

a first signal generator operating to generate an RF signal at a first frequency;

a second signal generator operating to generate an RF signal at a second frequency;

two or more RF diodes carried by an article and responsive to the first and second frequencies to generate an harmonic signal;

an antenna receiving the harmonic signal and, in response to receiving the harmonic signal, generating an analyzer signal;

a signal analyzer coupled to the antenna and responsive to the analyzer signal to identify the article;

wherein the analyzer signal from the receiving antenna to the signal analyzer comprises a subtraction of the first frequency signal from twice the second frequency signal.

12. (Previously Presented) An harmonic article identification system, comprising:

a first signal generator operating to generate an RF signal at a first frequency;

a second signal generator operating to generate an RF signal at a second frequency;

two or more RF diodes carried by an article and responsive to the first and second frequencies to generate an harmonic signal;

an antenna receiving the harmonic signal and, in response to receiving the harmonic signal, generating an analyzer signal;

a signal analyzer coupled to the antenna and responsive to the analyzer signal to identify the article;

wherein the analyzer signal from the receiving antenna to the signal analyzer varies in accordance with the expression:

2F1 - F2,

wherein:

F1 equals the first frequency, and

F2 equals the second frequency.

13. (Currently Amended) <u>An harmonic article identification system, comprising:</u>

<u>a first signal generator operating to generate an RF signal at a first frequency;</u>

<u>a second signal generator operating to generate an RF signal at a second frequency;</u>

<u>two or more RF diodes carried by an article and responsive to the first and second frequencies to generate an harmonic signal;</u>

<u>an antenna receiving the harmonic signal and, in response to receiving the harmonic signal, generating an analyzer signal;</u>

<u>a signal analyzer coupled to the antenna and responsive to the analyzer signal to identify the article;</u> ~~The harmonic article identification system as in Claim 10~~

wherein the analyzer signal from the receiving antenna to the signal analyzer comprises a subtraction of the second frequency signal from twice the first frequency signal.

14. (Previously Presented) An harmonic article identification system, comprising:

a first signal generator operating to generate an RF signal at a first frequency;

a second signal generator operating to generate an RF signal at a second frequency;

two or more RF diodes carried by an article and responsive to the first and second frequencies to generate an harmonic signal;

an antenna receiving the harmonic signal and, in response to receiving the harmonic signal, generating an analyzer signal;

a signal analyzer coupled to the antenna and responsive to the analyzer signal to identify the article;

wherein the analyzer signal from the receiving antenna to the signal analyzer varies in accordance with the expression:

2F2 - F1,

wherein:

F1 is the first frequency, and

F2 is the second frequency.

15. (Currently Amended) The harmonic article identification system as in ~~Claim 10~~ Claim 11 wherein the two or more RF diodes comprise a signature identification of the article.

16. (Currently Amended) The harmonic article identification system as in ~~Claim 10~~ Claim 11 wherein the at least two or more RF diodes respond to RF signals in a frequency range from about 24.0 GHz to about 24.1 GHz.

17. (Currently Amended) The harmonic article identification system as in ~~Claim 10~~ Claim 11 wherein the antenna comprises a dipole having a wavelength determined by either the first frequency or the second frequency.

18. (Canceled).

19. (Canceled).

20. (Canceled).

21. (Canceled).

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22. (Previously Presented) An harmonic article identification system, comprising:

a first signal generator outputting an RF signal at a frequency of 24.0 GHZ;

a second signal generator outputting an RF signal at a frequency of 24.1 GHZ;

two or more RF diodes carried by an article and responsive to the 24.0 GHZ frequency and the 24.1 GHZ frequency to generate an harmonic signal;

a dipole antenna receiving the harmonic signal and, in response to the dipole antenna receiving the harmonic signal generating an analyzer signal varying in accordance with the expression:

$2F1 - F2,$

wherein:

$F1$ equals the 24.0 GHZ frequency, and

$F2$ equals the 24.1 GHZ frequency; and

a signal analyzer coupled to the dipole antenna and responsive to the analyzer signal to identify the article.

23. (Previously Presented) An harmonic article identification system, comprising:

a first signal generator outputting an RF signal at a frequency of 24.0 GHZ;

a second signal generator outputting an RF signal at a frequency of 24.1 GHZ;

two or more RF diodes carried by an article and responsive to the 24.0 GHZ frequency and the 24.1 GHZ frequency to generate an harmonic signal having a third order intermodulation product;

a dipole antenna receiving or any other tuned antenna receiving the harmonic signal and, in response to the dipole antenna receiving the harmonic signal, generating an analyzer signal varying in accordance with the expression:

2F2 - F1,

wherein:

F1 equals the 24.0 GHZ frequency, and

F2 equals the 24.1 GHZ frequency; and

a signal analyzer coupled to the dipole antenna and responsive to the analyzer signal to identify the article.

24. (Canceled).

25. (Canceled).

26. (Canceled).

27. (Canceled).

28. (Canceled).

29.   (Canceled).

30.   (Canceled).

31.   (Canceled).

32.   (Canceled).

33.   (Canceled).

34.   (Previously   Presented)   An   harmonic   article
identification tag, comprising:

at   least   one   RF   diode   carried   by   an   article   and
responsive to at least two RF signals to generate an harmonic
signal having a third order intermodulation product defined by
the expression of twice a first one of the two RF signals less
a second one of the two RF signals, the at least one diode
generating harmonic signal characteristics for RF article
identification.